

SEQUENCE LISTING

<110> Isfort, Robert
Sheldon, Russell

<120> Methods for Identifying Compounds for Regulating Muscle Mass or Function
Using Vasoactive Intestinal Peptide Receptors

<130> 8311

<160> 16

<170> PatentIn version 3.0

<210> 1

<211> 457

<212> PRT

<213> homo sapiens;

<400> 1

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Leu Gln Glu Glu Cys Asp Tyr Val Gln Met Ile Glu Val Gln His Lys
          35          40          45

Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Glu Thr Ile Gly Cys Ser
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Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Ala Thr Pro Arg Gly Gln
65          70          75          80

Val Val Val Leu Ala Cys Pro Leu Ile Phe Lys Leu Phe Ser Ser Ile
          85          90          95

Gln Gly Arg Asn Val Ser Arg Ser Cys Thr Asp Glu Gly Trp Thr His
          100          105          110

Leu Glu Pro Gly Pro Tyr Pro Ile Ala Cys Gly Leu Asp Asp Lys Ala
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Ala Ser Leu Asp Glu Gln Gln Thr Met Phe Tyr Gly Ser Val Lys Thr
          130          135          140

Gly Tyr Thr Ile Gly Tyr Gly Leu Ser Leu Ala Thr Leu Leu Val Ala
145          150          155          160

Thr Ala Ile Leu Ser Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
          165          170          175

Ile His Met His Leu Phe Ile Ser Phe Ile Leu Arg Ala Ala Ala Val
          180          185          190

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Phe Ile Lys Asp Leu Ala Leu Phe Asp Ser Gly Glu Ser Asp Gln Cys
195 200 205
Ser Glu Gly Ser Val Gly Cys Lys Ala Ala Met Val Phe Phe Gln Tyr
210 215 220
Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr Leu
225 230 235 240
Tyr Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe Trp
245 250 255
Gly Tyr Ile Leu Ile Gly Trp Gly Val Pro Ser Thr Phe Thr Met Val
260 265 270
Trp Thr Ile Ala Arg Ile His Phe Glu Asp Tyr Gly Cys Trp Asp Thr
275 280 285
Ile Asn Ser Ser Leu Trp Trp Ile Ile Lys Gly Pro Ile Leu Thr Ser
290 295 300
Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg Ile Leu Leu
305 310 315 320
Gln Lys Leu Arg Pro Pro Asp Ile Arg Lys Ser Asp Ser Ser Pro Tyr
325 330 335
Ser Arg Leu Ala Arg Ser Thr Leu Leu Leu Ile Pro Leu Phe Gly Val
340 345 350
His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Pro Glu Val
355 360 365
Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe Val Val
370 375 380
Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu Arg
385 390 395 400
Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp Asn Pro
405 410 415
Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr Cys Ser Thr
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Gln Val Ser Met Leu Thr Arg Val Ser Pro Gly Ala Arg Arg Ser Ser
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Ser Phe Gln Ala Glu Val Ser Leu Val
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<210> 2
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<213> homo sapiens;

<400> 2

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Leu	Gln	Glu	Glu	Cys	Asp	Tyr	Val	Gln	Met	Ile	Glu	Val	Gln	His	Lys	35	40	45	
Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Glu	Thr	Ile	Gly	Cys	Ser	50	55	60	
Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly	Gln	65	70	75	80
Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Ser	Ile	85	90	95	
Gln	Gly	Arg	Asn	Val	Ser	Arg	Ser	Cys	Thr	Asp	Glu	Gly	Trp	Thr	His	100	105	110	
Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Leu	Asp	Asp	Lys	Ala	115	120	125	
Ala	Ser	Leu	Asp	Glu	Gln	Gln	Thr	Met	Phe	Tyr	Gly	Ser	Val	Lys	Thr	130	135	140	
Gly	Tyr	Thr	Ile	Gly	Tyr	Gly	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Val	Ala	145	150	155	160
Thr	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr	165	170	175	
Ile	His	Met	His	Leu	Phe	Ile	Ser	Phe	Ile	Leu	Arg	Ala	Ala	Ala	Val	180	185	190	
Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Gly	Glu	Ser	Asp	Gln	Cys	195	200	205	
Ser	Glu	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Met	Val	Phe	Phe	Gln	Tyr	210	215	220	
Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr	Leu	225	230	235	240
Tyr	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe	Trp	245	250	255	
Gly	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Val	Pro	Ser	Thr	Phe	Thr	Met	Val	260	265	270	
Trp	Thr	Ile	Ala	Arg	Ile	His	Phe	Glu	Asp	Tyr	Gly	Leu	Leu	Arg	Cys	275	280	285	
Trp	Asp	Thr	Ile	Asn	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Gly	Pro	Ile	290	295	300	

Leu Thr Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg
 305 310 315 320
 Ile Leu Leu Gln Lys Leu Arg Pro Pro Asp Ile Arg Lys Ser Asp Ser
 325 330 335
 Ser Pro Tyr Ser Arg Leu Ala Arg Ser Thr Leu Leu Leu Ile Pro Leu
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 Phe Gly Val His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys
 355 360 365
 Pro Glu Val Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly
 370 375 380
 Phe Val Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala
 385 390 395 400
 Glu Leu Arg Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly
 405 410 415
 Trp Asn Pro Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr
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<210> 3
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 <212> PRT
 <213> rattus norvegicus;

<400> 3

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 20 25 30
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 35 40 45
 Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Glu Thr Thr Gly Cys Ser
 50 55 60
 Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Thr Thr Pro Arg Gly Gln
 65 70 75 80
 Ala Val Val Leu Asp Cys Pro Leu Ile Phe Gln Leu Phe Ala Pro Ile
 85 90 95
 His Gly Tyr Asn Ile Ser Arg Ser Cys Thr Glu Glu Gly Trp Ser Gln

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Leu	Glu	Pro	Gly	Pro	Tyr	His	Ile	Ala	Cys	Gly	Leu	Asn	Asp	Arg	Ala
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Ser	Ser	Leu	Asp	Glu	Gln	Gln	Gln	Thr	Lys	Phe	Tyr	Asn	Thr	Val	Lys
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Thr	Gly	Tyr	Thr	Ile	Gly	Tyr	Ser	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Val
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Ala	Met	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn
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Tyr	Ile	His	Met	His	Leu	Phe	Met	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Ala
			180					185						190	
Val	Phe	Ile	Lys	Asp	Met	Ala	Leu	Phe	Asn	Ser	Gly	Glu	Ile	Asp	His
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Cys	Ser	Glu	Ala	Ser	Val	Gly	Cys	Lys	Ala	Ala	Val	Val	Phe	Phe	Gln
		210					215					220			
Tyr	Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr
							230					235			
Leu	Tyr	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe
				245					250					255	
Trp	Gly	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Val	Pro	Ser	Val	Phe	Ile	Thr
			260					265						270	
Ile	Trp	Thr	Val	Val	Arg	Ile	Tyr	Phe	Glu	Asp	Phe	Gly	Cys	Trp	Asp
			275				280					285			
Thr	Ile	Ile	Asn	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Ala	Pro	Ile	Leu
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							310					315			
Leu	Val	Gln	Lys	Leu	Arg	Pro	Pro	Asp	Ile	Gly	Lys	Asn	Asp	Ser	Ser
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Pro	Tyr	Ser	Arg	Leu	Ala	Lys	Ser	Thr	Leu	Leu	Leu	Ile	Pro	Leu	Phe
			340					345						350	
Gly	Ile	His	Tyr	Val	Met	Phe	Ala	Phe	Phe	Pro	Asp	Asn	Phe	Lys	Ala
			355				360					365			
Gln	Val	Lys	Met	Val	Phe	Glu	Leu	Val	Val	Gly	Ser	Phe	Gln	Gly	Phe
			370				375					380			
Val	Val	Ala	Ile	Leu	Tyr	Cys	Phe	Leu	Asn	Gly	Glu	Val	Gln	Ala	Glu
							390					395			
Leu	Arg	Arg	Lys	Trp	Arg	Arg	Trp	His	Leu	Gln	Gly	Val	Leu	Gly	Trp

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Ser	Ser	Lys	Ser	Gln	His	Pro	Trp	Gly	Gly	Ser	Asn	Gly	Ala	Thr	Cys				
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Ser	Thr	Gln	Val	Ser	Met	Leu	Thr	Arg	Val	Ser	Pro	Ser	Ala	Arg	Arg				
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<210> 4
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 <213> mus musculus;

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Pro	His	Gln	Glu	Cys	Glu	Tyr	Leu	Gln	Met	Ile	Glu	Lys	Gln	Arg	Gln				
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Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Lys	Thr	Thr	Gly	Cys	Ser				
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Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Thr	Thr	Pro	Trp	Gly	Gln				
65				70					75						80				
Val	Val	Val	Leu	Asp	Cys	Pro	Leu	Ile	Phe	Gln	Leu	Phe	Ser	Pro	Ile				
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His	Gly	Tyr	Asn	Ile	Ser	Arg	Asn	Cys	Thr	Glu	Glu	Gly	Trp	Ser	Gln				
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Leu	Glu	Pro	Gly	Pro	Tyr	His	Ile	Ala	Cys	Gly	Leu	Asn	Asp	Arg	Ala				
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Ser	Ser	Met	Asp	Glu	Gln	Gln	Gln	Thr	Glu	Phe	Tyr	Asp	Ala	Val	Lys				
		130				135					140								
Thr	Gly	Tyr	Thr	Ile	Gly	Tyr	Ser	Leu	Ser	Leu	Ala	Ser	Leu	Leu	Val				
145					150					155					160				
Ala	Met	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn				
			165					170						175					
Tyr	Ile	His	Met	His	Leu	Phe	Met	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Ala				
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Val	Phe	Ile	Lys	Asp	Met	Ala	Leu	Phe	Asn	Asn	Gly	Glu	Thr	Asp	His				
		195					200					205							

Cys Ser Glu Ala Ser Val Ser Cys Lys Ala Ala Val Val Phe Phe Gln
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 Tyr Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr
 225 230 235 240
 Leu His Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe
 245 250 255
 Trp Gly Tyr Ile Leu Ile Gly Trp Gly Val Pro Ser Val Phe Ile Met
 260 265 270
 Ile Trp Thr Ile Val Arg Ile His Phe Glu Asp Phe Gly Cys Trp Asp
 275 280 285
 Thr Ile Ile Asn Ser Ser Leu Trp Trp Ile Ile Lys Gly Pro Ile Leu
 290 295 300
 Ile Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Cys Ile Ile Arg Ile
 305 310 315 320
 Leu Val Gln Lys Leu Arg Pro Pro Asp Ile Gly Lys Asn Asp Ser Ser
 325 330 335
 Pro Tyr Ser Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe
 340 345 350
 Gly Val His Tyr Val Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Ala
 355 360 365
 Gln Val Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe
 370 375 380
 Val Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu
 385 390 395 400
 Leu Arg Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp
 405 410 415
 Ser Ser Lys Ser Gln His Pro Trp Gly Gly Ser Asn Gly Val Ser Cys
 420 425 430
 Ser Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Ser Ala Arg Arg
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 Ser Ser Ser Phe Gln Ala Glu Val Ser Leu Val
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<210> 5
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 <212> PRT
 <213> sus scrofa;

<400> 5

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			20					25					30				
Leu	Gln	Gln	Glu	Glu	Cys	Asp	Tyr	Leu	Gln	Met	Ile	Lys	Val	Gln	His		
		35					40					45					
Lys	Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Glu	Thr	Ser	Gly	Cys		
	50					55					60						
Ser	Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly		
65					70					75					80		
Gln	Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Pro		
				85					90					95			
Thr	Gln	Gly	Leu	Asn	Val	Ser	Arg	Asn	Cys	Thr	Asp	Glu	Gly	Trp	Thr		
			100					105					110				
Pro	Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Met	Asp	Asp	Lys		
		115					120					125					
Ala	Ser	Gly	Leu	Asp	Glu	Gln	Gln	Thr	Val	Phe	Tyr	Asn	Ser	Val	Lys		
	130					135					140						
Thr	Gly	Tyr	Thr	Ile	Gly	Tyr	Ser	Leu	Ser	Leu	Ala	Ala	Leu	Leu	Val		
145					150					155					160		
Ala	Thr	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn		
			165					170						175			
Tyr	Ile	His	Met	His	Leu	Phe	Ile	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Ala		
			180					185					190				
Val	Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Glu	Glu	Ser	Asp	His		
	195						200					205					
Cys	Ser	Lys	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Val	Val	Leu	Phe	Gln		
	210					215					220						
Tyr	Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr		
225					230					235					240		
Leu	His	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe		
			245					250						255			
Trp	Gly	Tyr	Ile	Phe	Val	Gly	Trp	Gly	Val	Pro	Ser	Thr	Phe	Ile	Met		
			260					265						270			
Val	Trp	Thr	Val	Val	Arg	Ile	His	Phe	Glu	Asp	Tyr	Gly	Cys	Trp	Asp		
		275				280						285					
Thr	Ile	His	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Ala	Pro	Ile	Leu	Ala		
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Ser	Ile	Leu	Val	Asn	Phe	Ile	Leu	Phe	Ile	Arg	Ile	Ile	Gly	Ile	Leu		
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Val Gln Lys Leu Arg Pro Pro Asp Val Gly Lys Ser Asp Asn Ser Pro
325 330 335

Tyr Ser Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe Gly
340 345 350

Val His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Ala Glu
355 360 365

Val Lys Met Val Phe Glu Leu Ile Val Gly Ser Phe Gln Gly Cys Val
370 375 380

Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu
385 390 395 400

Arg Arg Lys Trp Arg Arg Trp His Gln Gln Gly Val Leu Gly Trp Asp
405 410 415

Ser Lys Tyr Gln His Pro Ser Gly Gly Ser Asn Gly Asp Thr Cys Ser
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Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Ser Ala Arg Arg Ser
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Ser Ser Phe Gln Ala Glu Val Ser Leu Val
450 455

<210> 6

<211> 444

<212> PRT

<213> rana ridibunda;

<400> 6

Met Glu Phe Leu Pro Leu Leu Leu Cys Leu Thr Gly Leu Phe Ser Pro
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Ile Leu Cys Val Pro Glu Glu Cys Ser Ile Met Tyr Gln Ile Glu Leu
20 25 30

Lys His Glu Glu Cys Val Asn His Glu Asp Tyr Phe Asn Asp Thr Ala
35 40 45

Val Cys Lys Arg Thr Trp Asp Asn Ile Thr Cys Trp Pro Ser Ala Ser
50 55 60

Ile Gly Glu Val Val Val Leu Gln Cys Pro Gly Tyr Phe Ser Met Phe
65 70 75 80

Thr Thr Gly Thr Val Asn Gly Asn Val Ser Lys Asn Cys Thr Ser Glu
85 90 95

Gly Trp Ser Glu Met Tyr Pro Ala Thr Tyr Ala Ala Ala Cys Gly Phe
100 105 110

Ser Thr Asn Asp Thr Pro Thr Glu Gln Gln Thr Val Phe Phe Gly Ala

115					120					125					
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Thr	Ala	Ala	Met	Ile	Ile	Leu	Cys	Ile	Phe	Arg	Lys	Leu	His	Cys	Thr
145						150					155				160
Arg	Asn	Tyr	Ile	His	Met	His	Leu	Phe	Met	Ser	Phe	Ile	Met	Arg	Ala
				165					170					175	
Ile	Ala	Val	Phe	Ile	Lys	Asp	Ile	Val	Leu	Phe	Glu	Ser	Gly	Glu	Ser
			180					185					190		
Asp	His	Cys	His	Val	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Met	Val	Phe
		195					200					205			
Phe	Gln	Tyr	Cys	Ile	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly
	210					215					220				
Leu	Tyr	Leu	His	Asn	Leu	Leu	Val	Ile	Ser	Phe	Phe	Ser	Glu	Lys	Lys
225					230					235					240
Tyr	Phe	Trp	Trp	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Ala	Pro	Ser	Val	Phe
				245					250					255	
Ile	Thr	Ala	Trp	Ser	Leu	Ala	Arg	Val	Tyr	Phe	Glu	Asp	Thr	Gly	Cys
			260					265					270		
Trp	Asp	Thr	Ile	Glu	Ser	His	Leu	Trp	Trp	Ile	Ile	Lys	Thr	Pro	Ile
		275					280					285			
Leu	Val	Ser	Ile	Leu	Val	Asn	Phe	Ile	Leu	Phe	Ile	Cys	Ile	Ile	Arg
	290					295					300				
Ile	Leu	Val	Gln	Lys	Leu	His	Ser	Pro	Asp	Val	Gly	Arg	Asn	Glu	Asn
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Ser	Gln	Tyr	Thr	Arg	Leu	Ala	Lys	Ser	Thr	Leu	Leu	Leu	Ile	Pro	Leu
				325					330					335	
Phe	Gly	Val	His	Tyr	Ile	Met	Phe	Ala	Phe	Phe	Pro	Asp	Asn	Phe	Lys
			340					345					350		
Val	Glu	Val	Lys	Leu	Val	Phe	Glu	Leu	Ile	Leu	Gly	Ser	Phe	Gln	Gly
	355						360					365			
Phe	Val	Val	Ala	Val	Leu	Tyr	Cys	Phe	Leu	Asn	Gly	Glu	Val	Gln	Ala
	370					375					380				
Glu	Leu	Lys	Arg	Lys	Trp	Arg	Arg	Trp	Asn	Leu	Glu	Arg	Phe	Met	Gly
385					390					395					400
Lys	Asp	Met	Lys	Tyr	His	His	Pro	Ser	Leu	Gly	Ser	Asn	Gly	Thr	Asn
				405					410					415	
Phe	Ser	Thr	Gln	Ile	Ser	Met	Leu	Thr	Lys	Cys	Ser	Pro	Lys	Thr	Arg

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Gly	Val	Leu	Ala	Cys	Val	Leu	Gly	Pro	Val	Gly	Ser	Trp	Ala	Val	Gly				
			20					25					30						
Leu	Gln	Gln	Glu	Glu	Cys	Asp	Tyr	Leu	Gln	Met	Ile	Lys	Val	Gln	His				
			35				40					45							
Lys	Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Glu	Thr	Ser	Gly	Cys				
	50					55					60								
Ser	Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly				
65				70					75						80				
Gln	Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Pro				
				85					90					95					
Thr	Gln	Gly	Leu	Asn	Val	Ser	Arg	Asn	Cys	Thr	Asp	Glu	Gly	Trp	Thr				
			100					105					110						
Pro	Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Met	Asp	Asp	Lys				
		115					120					125							
Ala	Ser	Gly	Leu	Asp	Glu	Gln	Gln	Thr	Val	Phe	Tyr	Asn	Ser	Val	Lys				
		130				135					140								
Thr	Gly	Tyr	Thr	Ile	Gly	Tyr	Ser	Leu	Ser	Leu	Ala	Ala	Leu	Leu	Val				
145				150						155					160				
Ala	Thr	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn				
			165					170						175					
Tyr	Ile	His	Met	His	Leu	Phe	Ile	Ser	Phe	Ile	Leu	Arg	Ala	Thr	Ala				
			180					185					190						
Val	Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Glu	Glu	Ser	Asp	His				
		195				200						205							
Cys	Ser	Lys	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Val	Val	Leu	Phe	Gln				
	210					215					220								
Tyr	Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr				
225					230					235					240				

Leu His Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe
 245 250 255
 Trp Gly Tyr Ile Phe Val Gly Trp Gly Val Pro Ser Thr Phe Ile Met
 260 265 270
 Val Trp Thr Val Val Arg Ile His Phe Glu Asp Tyr Gly Cys Trp Asp
 275 280 285
 Thr Ile His Ser Ser Leu Trp Trp Ile Ile Lys Ala Pro Ile Leu Ala
 290 295 300
 Ser Ile Leu Val Asn Phe Ile Leu Phe Ile Arg Ile Ile Gly Ile Leu
 305 310 315 320
 Val Gln Lys Leu Arg Pro Pro Asp Val Gly Lys Ser Asp Asn Ser Pro
 325 330 335
 Tyr Ser Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe Gly
 340 345 350
 Val His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Ala Glu
 355 360 365
 Val Lys Met Val Phe Glu Leu Ile Val Gly Ser Phe Gln Gly Cys Val
 370 375 380
 Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu
 385 390 395 400
 Arg Arg Lys Trp Arg Arg Trp His Gln Gln Gly Val Leu Gly Trp Asp
 405 410 415
 Ser Lys Tyr Gln His Pro Ser Gly Gly Ser Asn Gly Asp Thr Cys Ser
 420 425 430
 Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Ser Ala Arg Arg Ser
 435 440 445
 Ser Ser Phe Gln Ala Glu Val Ser Leu Val
 450 455

<210> 8
 <211> 459
 <212> PRT
 <213> rattus sp;

<400> 8

Met Arg Pro Pro Ser Pro Pro His Val Arg Trp Leu Cys Val Leu Ala
 1 5 10 15
 Gly Ala Leu Ala Cys Ala Leu Arg Pro Ala Gly Ser Gln Ala Ala Ser
 20 25 30
 Pro Gln His Glu Cys Glu Tyr Leu Gln Leu Ile Glu Ile Gln Arg Gln
 35 40 45

Gln Cys Leu Glu Glu Ala Gln Leu Glu Asn Glu Thr Thr Gly Cys Ser
 50 55 60
 Lys Met Trp Asp Asn Leu Thr Cys Trp Pro Thr Thr Pro Arg Gly Gln
 65 70 75 80
 Ala Val Val Leu Asp Cys Pro Leu Ile Phe Gln Leu Phe Ala Pro Ile
 85 90 95
 His Gly Tyr Asn Ile Ser Arg Ser Cys Thr Glu Glu Gly Trp Ser Gln
 100 105 110
 Leu Glu Pro Gly Pro Tyr His Ile Ala Cys Gly Leu Asn Asp Arg Ala
 115 120 125
 Ser Ser Leu Asp Glu Gln Gln Gln Thr Lys Phe Tyr Asn Thr Val Lys
 130 135 140
 Thr Gly Tyr Thr Ile Gly Tyr Ser Leu Ser Leu Ala Ser Leu Leu Val
 145 150 155 160
 Ala Met Ala Ile Leu Ser Leu Phe Arg Lys Leu His Cys Thr Arg Asn
 165 170 175
 Tyr Ile His Met His Leu Phe Met Ser Phe Ile Leu Arg Ala Thr Ala
 180 185 190
 Val Phe Ile Lys Asp Met Ala Leu Phe Asn Ser Gly Glu Ile Asp His
 195 200 205
 Cys Ser Glu Ala Ser Val Gly Cys Lys Ala Ala Val Val Phe Phe Gln
 210 215 220
 Tyr Cys Val Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly Leu Tyr
 225 230 235 240
 Leu Tyr Thr Leu Leu Ala Val Ser Phe Phe Ser Glu Arg Lys Tyr Phe
 245 250 255
 Trp Gly Tyr Ile Leu Ile Gly Trp Gly Val Pro Ser Val Phe Ile Thr
 260 265 270
 Ile Trp Thr Val Val Arg Ile Tyr Phe Glu Asp Phe Gly Cys Trp Asp
 275 280 285
 Thr Ile Ile Asn Ser Ser Leu Trp Trp Ile Ile Lys Ala Pro Ile Leu
 290 295 300
 Leu Ser Ile Leu Val Asn Phe Val Leu Phe Ile Cys Ile Ile Arg Ile
 305 310 315 320
 Leu Val Gln Lys Leu Arg Pro Pro Asp Ile Gly Lys Asn Asp Ser Ser
 325 330 335
 Pro Tyr Ser Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe
 340 345 350

Gly Ile His Tyr Val Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Ala
355 360 365

Gln Val Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe
370 375 380

Val Val Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu
385 390 395 400

Leu Arg Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp
405 410 415

Ser Ser Lys Ser Gln His Pro Trp Gly Gly Ser Asn Gly Ala Thr Cys
420 425 430

Ser Thr Gln Val Ser Met Leu Thr Arg Val Ser Pro Ser Ala Arg Arg
435 440 445

Ser Ser Ser Phe Gln Ala Glu Val Ser Leu Val
450 455

<210> 9

<211> 447

<212> PRT

<213> Carassius auratus;

<400> 9

Met Cys Asp Val Val Asn Glu Ile Glu Leu Ala Arg Ala Arg Cys Glu
1 5 10 15

Asn Lys Thr Ala Gly Asn Val Thr Ser Gly Cys Lys Gly Met Trp Asp
20 25 30

Ile Ile Ala Cys Trp Pro Ser Ala Lys Val Gly Glu His Val Val Ile
35 40 45

Pro Cys Pro Asn Tyr Phe Arg His Phe Ser Asp His His Glu Gly Asn
50 55 60

Leu Ser Lys Thr Cys Thr Ala Asp Gly Trp Thr Glu Met Asp Pro Met
65 70 75 80

Glu Ile Ala Val Tyr Cys Gly Tyr Asn Leu Asn Gly Thr Val Asp Asp
85 90 95

Asp Ser Phe Phe Arg Ser Val Lys Ile Gly Tyr Thr Ile Gly His Ser
100 105 110

Val Ser Leu Ile Ser Leu Thr Thr Ala Ile Val Ile Leu Cys Met Ser
115 120 125

Arg Lys Leu His Cys Thr Arg Asn Tyr Ile His Met His Leu Phe Val
130 135 140

Ser Phe Ile Leu Lys Ala Ile Ala Val Phe Val Lys Asp Ala Val Leu

145		150		155		160
Tyr Asp Val Ile Gln Glu Ser Asp Asn Cys Ser Thr Ala Ser Val Gly						
		165		170		175
Cys Lys Ala Val Ile Val Phe Phe Gln Tyr Cys Ile Met Ala Ser Phe						
		180		185		190
Phe Trp Leu Leu Val Glu Gly Leu Tyr Leu His Ala Leu Leu Ala Val						
		195		200		205
Ser Phe Phe Ser Glu Arg Lys Tyr Phe Trp Trp Tyr Ile Leu Ile Gly						
		210		215		220
Trp Gly Gly Pro Thr Ile Phe Ile Met Ala Trp Ser Phe Ala Lys Ala						
		225		230		235
Tyr Phe Asn Asp Val Gly Cys Trp Asp Ile Ile Glu Asn Ser Asp Leu						
		245		250		255
Phe Trp Trp Ile Ile Lys Thr Pro Ile Leu Ala Ser Ile Leu Met Asn						
		260		265		270
Phe Ile Leu Phe Ile Cys Ile Ile Arg Ile Leu Arg Gln Lys Ile Asn						
		275		280		285
Cys Pro Asp Ile Gly Arg Asn Glu Ser Asn Gln Tyr Ser Arg Leu Ala						
		290		295		300
Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe Gly Ile Asn Phe Ile Ile						
		305		310		315
Phe Ala Phe Ile Pro Glu Asn Ile Lys Thr Glu Leu Arg Leu Val Phe						
		325		330		335
Asp Leu Ile Leu Gly Ser Phe Gln Gly Phe Val Val Ala Val Leu Tyr						
		340		345		350
Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Ile Lys Arg Lys Trp Arg						
		355		360		365
Arg Trp His Leu Glu Arg Phe Leu Gly Pro Asp Thr Lys Tyr Gln His						
		370		375		380
Pro Ser Met Gly Ser Asn Gly Asn Asn Phe Ser Thr Gln Ile Ser Met						
		385		390		395
Leu Thr Arg Cys Ser Pro Lys Thr Arg Arg Ala Ser Thr Cys Gln Asp						
		405		410		415
Glu Thr Ser Ile Thr Val Leu Gly Ser Thr Thr Met Gly Tyr Gly His						
		420		425		430
Gln Asn Glu Thr Val Lys Gly His Glu Asp Val Arg Glu Val Ser						
		435		440		445

<210> 10

<211> 438
<212> PRT
<213> homo sapiens;

<400> 10

Met	Arg	Thr	Leu	Leu	Pro	Pro	Ala	Leu	Leu	Thr	Cys	Trp	Leu	Leu	Ala
1			5					10					15		
Pro	Val	Asn	Ser	Ile	His	Pro	Glu	Cys	Arg	Phe	His	Leu	Glu	Ile	Gln
		20					25					30			
Glu	Glu	Glu	Thr	Lys	Cys	Ala	Glu	Leu	Leu	Arg	Ser	Gln	Thr	Glu	Lys
		35					40					45			
His	Lys	Ala	Cys	Ser	Gly	Val	Trp	Asp	Asn	Ile	Thr	Cys	Trp	Arg	Pro
	50					55					60				
Ala	Asn	Val	Gly	Glu	Thr	Val	Thr	Val	Pro	Cys	Pro	Lys	Val	Phe	Ser
65					70				75						80
Asn	Phe	Tyr	Ser	Lys	Ala	Gly	Asn	Ile	Ser	Lys	Asn	Cys	Thr	Ser	Asp
			85					90						95	
Gly	Trp	Ser	Glu	Thr	Phe	Pro	Asp	Phe	Val	Asp	Ala	Cys	Gly	Tyr	Ser
			100					105					110		
Asp	Pro	Glu	Asp	Glu	Ser	Lys	Ile	Thr	Phe	Tyr	Ile	Leu	Val	Lys	Ala
		115					120					125			
Ile	Tyr	Thr	Leu	Gly	Tyr	Ser	Val	Ser	Leu	Met	Ser	Leu	Ala	Thr	Gly
	130					135					140				
Ser	Ile	Ile	Leu	Cys	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr
145				150						155					160
Ile	His	Leu	Asn	Leu	Phe	Leu	Ser	Phe	Ile	Leu	Arg	Ala	Ile	Ser	Val
			165						170					175	
Leu	Val	Lys	Asp	Asp	Val	Leu	Tyr	Ser	Ser	Ser	Gly	Thr	Leu	His	Cys
			180					185					190		
Pro	Asp	Gln	Pro	Ser	Ser	Trp	Val	Gly	Cys	Lys	Leu	Ser	Leu	Val	Phe
		195				200						205			
Leu	Gln	Tyr	Cys	Ile	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly
	210					215					220				
Leu	Tyr	Leu	His	Thr	Leu	Leu	Val	Ala	Met	Leu	Pro	Pro	Arg	Arg	Cys
225					230					235					240
Phe	Leu	Ala	Tyr	Leu	Leu	Ile	Gly	Trp	Gly	Leu	Pro	Thr	Val	Cys	Ile
			245						250					255	
Gly	Ala	Trp	Thr	Ala	Ala	Arg	Leu	Tyr	Leu	Glu	Asp	Thr	Gly	Cys	Trp
			260					265					270		

Asp Thr Asn Asp His Ser Val Pro Trp Trp Val Ile Arg Ile Pro Ile
275 280 285

Leu Ile Ser Ile Ile Val Asn Phe Val Leu Phe Ile Ser Ile Ile Arg
290 295 300

Ile Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln
305 310 315 320

Ser Gln Tyr Lys Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu
325 330 335

Phe Gly Val His Tyr Met Val Phe Ala Val Phe Pro Ile Ser Ile Ser
340 345 350

Ser Lys Tyr Gln Ile Leu Phe Glu Leu Cys Leu Gly Ser Phe Gln Gly
355 360 365

Leu Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys
370 375 380

Glu Leu Lys Arg Lys Trp Arg Ser Arg Cys Pro Thr Pro Ser Ala Ser
385 390 395 400

Arg Asp Tyr Arg Val Cys Gly Ser Ser Phe Ser Arg Asn Gly Ser Glu
405 410 415

Gly Ala Leu Gln Phe His Arg Gly Ser Arg Ala Gln Ser Phe Leu Gln
420 425 430

Thr Glu Thr Ser Val Ile
435

<210> 11

<211> 438

<212> PRT

<213> homo sapiens;

<400> 11

Met Arg Thr Leu Leu Pro Pro Ala Leu Leu Thr Cys Trp Leu Leu Ala
1 5 10 15

Pro Val Asn Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln
20 25 30

Glu Glu Glu Thr Lys Cys Thr Glu Leu Leu Arg Ser Gln Thr Glu Lys
35 40 45

His Lys Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro
50 55 60

Ala Asn Val Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser
65 70 75 80

Asn Phe Tyr Ser Lys Ala Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp
85 90 95

Gly	Trp	Ser	Glu	Thr	Phe	Pro	Asp	Phe	Val	Asp	Ala	Cys	Gly	Tyr	Ser		
			100					105					110				
Asp	Pro	Glu	Asp	Glu	Ser	Lys	Ile	Thr	Phe	Tyr	Ile	Leu	Val	Lys	Ala		
		115					120					125					
Ile	Tyr	Thr	Leu	Gly	Tyr	Ser	Val	Ser	Leu	Met	Ser	Leu	Ala	Thr	Gly		
	130					135					140						
Ser	Ile	Ile	Leu	Cys	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr		
145				150						155					160		
Ile	His	Leu	Asn	Leu	Phe	Leu	Ser	Phe	Ile	Leu	Arg	Ala	Ile	Ser	Val		
			165						170					175			
Leu	Val	Lys	Asp	Asp	Val	Leu	Tyr	Ser	Ser	Ser	Gly	Thr	Leu	His	Cys		
			180					185					190				
Pro	Asp	Gln	Pro	Ser	Ser	Trp	Val	Gly	Cys	Lys	Leu	Ser	Leu	Val	Phe		
		195					200					205					
Leu	Gln	Tyr	Cys	Ile	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly		
	210					215					220						
Leu	Tyr	Leu	His	Thr	Leu	Leu	Val	Ala	Met	Leu	Pro	Pro	Arg	Arg	Cys		
225					230					235					240		
Phe	Leu	Ala	Tyr	Leu	Leu	Ile	Gly	Trp	Gly	Leu	Pro	Thr	Val	Cys	Ile		
			245						250					255			
Gly	Ala	Trp	Thr	Ala	Ala	Arg	Leu	Tyr	Leu	Glu	Asp	Thr	Gly	Cys	Trp		
			260					265					270				
Asp	Thr	Asn	Asp	His	Ser	Val	Pro	Trp	Trp	Val	Ile	Arg	Ile	Pro	Ile		
		275					280					285					
Leu	Ile	Ser	Ile	Ile	Val	Asn	Phe	Val	Leu	Phe	Ile	Ser	Ile	Ile	Arg		
	290					295					300						
Ile	Leu	Leu	Gln	Lys	Leu	Thr	Ser	Pro	Asp	Val	Gly	Gly	Asn	Asp	Gln		
305					310					315					320		
Ser	Gln	Tyr	Lys	Arg	Leu	Ala	Lys	Ser	Thr	Leu	Leu	Leu	Ile	Pro	Leu		
			325						330					335			
Phe	Gly	Val	His	Tyr	Met	Val	Phe	Ala	Val	Phe	Pro	Ile	Ser	Ile	Ser		
			340					345					350				
Ser	Lys	Tyr	Gln	Ile	Leu	Phe	Glu	Leu	Cys	Leu	Gly	Ser	Phe	Gln	Gly		
		355					360				365						
Leu	Val	Val	Ala	Val	Leu	Tyr	Cys	Phe	Leu	Asn	Ser	Glu	Val	Gln	Cys		
	370					375					380						
Glu	Leu	Lys	Arg	Lys	Trp	Arg	Ser	Arg	Cys	Pro	Thr	Pro	Ser	Ala	Ser		
385					390					395					400		

Arg Asp Tyr Arg Val Cys Gly Ser Ser Phe Ser His Asn Gly Ser Glu
405 410 415

Gly Ala Leu Gln Phe His Arg Ala Ser Arg Ala Gln Ser Phe Leu Gln
420 425 430

Thr Glu Thr Ser Val Ile
435

<210> 12

<211> 438

<212> PRT

<213> homo sapiens

<400> 12

Met Arg Thr Leu Leu Pro Pro Ala Leu Leu Thr Cys Trp Leu Leu Ala
1 5 10 15

Pro Val Asn Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln
20 25 30

Glu Glu Glu Thr Lys Cys Ala Glu Leu Leu Arg Ser Gln Thr Glu Lys
35 40 45

His Lys Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro
50 55 60

Ala Asn Val Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser
65 70 75 80

Asn Phe Tyr Ser Lys Ala Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp
85 90 95

Gly Trp Ser Glu Thr Phe Pro Asp Phe Val Asp Ala Cys Gly Tyr Ser
100 105 110

Asp Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala
115 120 125

Ile Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Ala Thr Gly
130 135 140

Ser Ile Ile Leu Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
145 150 155 160

Ile His Leu Asn Leu Phe Leu Ser Phe Ile Leu Arg Ala Ile Ser Val
165 170 175

Leu Val Lys Asp Asp Val Leu Tyr Ser Ser Ser Gly Thr Leu His Cys
180 185 190

Pro Asp Gln Pro Ser Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe
195 200 205

Leu Gln Tyr Cys Ile Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly

210	215	220
Leu Tyr Leu His Thr	Leu Leu Val Ala Met	Leu Pro Pro Arg Arg Cys
225	230	235 240
Phe Leu Ala Tyr	Leu Leu Ile Gly Trp	Gly Leu Pro Thr Val Cys Ile
	245	250 255
Gly Ala Trp Thr	Ala Ala Arg Leu Tyr	Leu Glu Asp Thr Gly Cys Trp
	260	265 270
Asp Thr Asn Asp His Ser Val	Pro Trp Trp Val Ile Arg	Ile Pro Ile
	275	280 285
Leu Ile Ser Ile Ile Val	Asn Phe Val Leu Phe	Ile Ser Ile Ile Arg
	290	295 300
Ile Leu Leu Gln Lys	Leu Thr Ser Pro Asp	Val Gly Gly Asn Asp Gln
	305	310 315 320
Ser Gln Tyr Lys	Arg Leu Ala Lys Ser	Thr Leu Leu Leu Ile Pro Leu
	325	330 335
Phe Gly Val His Tyr Met Val	Phe Ala Val Phe Pro	Ile Ser Ile Ser
	340	345 350
Ser Lys Tyr Gln Ile Leu Phe	Glu Leu Cys Leu Gly	Ser Phe Gln Gly
	355	360 365
Leu Val Val Ala Val Leu Tyr	Cys Phe Leu Asn Ser	Glu Val Gln Cys
	370	375 380
Glu Leu Lys Arg Lys Trp Arg	Ser Arg Cys Pro Thr	Pro Ser Ala Ser
	385	390 395 400
Arg Asp Tyr Arg Val Cys Gly	Ser Ser Phe Ser His Asn	Gly Ser Glu
	405	410 415
Gly Ala Leu Gln Phe His Arg	Ala Ser Arg Ala Gln Ser	Phe Leu Gln
	420	425 430
Thr Glu Thr Ser Val Ile		
	435	

<210> 13
 <211> 437
 <212> PRT
 <213> mus musculus;

<400> 13

Met Arg Ala Ser Val Val Leu Thr Cys Tyr Cys Trp Leu Leu Val Arg
1 5 10 15
Val Ser Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln Glu
20 25 30

Glu	Glu	Thr	Lys	Cys	Ala	Glu	Leu	Leu	Ser	Ser	Gln	Thr	Glu	Asn	Gln	
		35					40					45				
Arg	Ala	Cys	Ser	Gly	Val	Trp	Asp	Asn	Ile	Thr	Cys	Trp	Arg	Pro	Ala	
	50					55					60					
Asp	Val	Gly	Glu	Thr	Val	Thr	Val	Pro	Cys	Pro	Lys	Val	Phe	Ser	Asn	
65					70					75					80	
Phe	Tyr	Ser	Arg	Pro	Gly	Asn	Ile	Ser	Lys	Asn	Cys	Thr	Ser	Asp	Gly	
				85					90					95		
Trp	Ser	Glu	Thr	Phe	Pro	Asp	Phe	Ile	Asp	Ala	Cys	Gly	Tyr	Asn	Asp	
			100					105						110		
Pro	Glu	Asp	Glu	Ser	Lys	Ile	Ser	Phe	Tyr	Ile	Leu	Val	Lys	Ala	Ile	
		115					120						125			
Tyr	Thr	Leu	Gly	Tyr	Ser	Val	Ser	Leu	Met	Ser	Leu	Thr	Thr	Gly	Ser	
		130				135								140		
Ile	Ile	Ile	Cys	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	
145					150					155					160	
His	Leu	Asn	Leu	Phe	Leu	Ser	Phe	Met	Leu	Arg	Ala	Ile	Ser	Val	Leu	
				165					170					175		
Val	Lys	Asp	Ser	Val	Leu	Tyr	Ser	Ser	Ser	Gly	Leu	Leu	Arg	Cys	His	
			180					185					190			
Asp	Gln	Pro	Ala	Ser	Trp	Val	Gly	Cys	Lys	Leu	Ser	Leu	Val	Phe	Phe	
		195					200						205			
Gln	Tyr	Cys	Ile	Met	Ala	Asn	Phe	Tyr	Trp	Leu	Leu	Val	Glu	Gly	Leu	
		210				215							220			
Tyr	Leu	His	Thr	Leu	Leu	Val	Ala	Ile	Leu	Pro	Pro	Ser	Arg	Cys	Phe	
225					230					235					240	
Leu	Ala	Tyr	Leu	Leu	Ile	Gly	Trp	Gly	Ile	Pro	Ser	Val	Cys	Ile	Gly	
				245					250					255		
Ala	Trp	Thr	Ala	Thr	Arg	Leu	Ser	Leu	Glu	Asp	Thr	Gly	Cys	Trp	Asp	
			260					265					270			
Thr	Asn	Asp	His	Ser	Ile	Pro	Trp	Trp	Val	Ile	Arg	Met	Pro	Ile	Leu	
		275					280						285			
Ile	Ser	Ile	Val	Val	Asn	Phe	Ala	Leu	Phe	Ile	Ser	Ile	Val	Arg	Ile	
		290				295					300					
Leu	Leu	Gln	Lys	Leu	Thr	Ser	Pro	Asp	Val	Gly	Gly	Asn	Asp	Gln	Ser	
305					310					315					320	
Gln	Tyr	Lys	Arg	Leu	Ala	Lys	Ser	Thr	Leu	Leu	Leu	Ile	Pro	Leu	Phe	
				325					330					335		

Gly Val His Tyr Met Val Phe Ala Ala Phe Pro Ile Gly Ile Ser Ser
340 345 350

Thr Tyr Gln Ile Leu Phe Glu Leu Cys Val Gly Ser Phe Gln Gly Leu
355 360 365

Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys Glu
370 375 380

Leu Lys Arg Arg Trp Arg Gly Leu Cys Leu Thr Gln Ala Gly Ser Arg
385 390 395 400

Asp Tyr Arg Leu His Ser Trp Ser Met Ser Arg Asn Gly Ser Glu Ser
405 410 415

Ala Leu Gln Ile His Arg Gly Ser Arg Thr Gln Ser Phe Leu Gln Ser
420 425 430

Glu Thr Ser Val Ile
435

<210> 14

<211> 437

<212> PRT

<213> rattus norvegicus;

<400> 14

Met Arg Ala Ser Val Val Leu Thr Cys Tyr Cys Trp Leu Leu Val Arg
1 5 10 15

Val Ser Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln Glu
20 25 30

Glu Glu Thr Lys Cys Ala Glu Leu Leu Ser Ser Gln Met Glu Asn His
35 40 45

Arg Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro Ala
50 55 60

Asp Ile Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser Asn
65 70 75 80

Phe Tyr Ser Arg Pro Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp Gly
85 90 95

Trp Ser Glu Thr Phe Pro Asp Phe Ile Asp Ala Cys Gly Tyr Asn Asp
100 105 110

Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala Ile
115 120 125

Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Thr Thr Gly Ser
130 135 140

Ile Ile Ile Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr Ile
145 150 155 160

His Leu Asn Leu Phe Leu Ser Phe Met Leu Arg Ala Ile Ser Val Leu
 165 170 175
 Val Lys Asp Ser Val Leu Tyr Ser Ser Ser Gly Thr Leu Arg Cys His
 180 185 190
 Asp Gln Pro Gly Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe Phe
 195 200 205
 Gln Tyr Cys Ile Met Ala Asn Phe Tyr Trp Leu Leu Val Glu Gly Leu
 210 215 220
 Tyr Leu His Thr Leu Leu Val Ala Ile Leu Pro Pro Ser Arg Cys Phe
 225 230 235 240
 Leu Ala Tyr Leu Leu Ile Gly Trp Gly Ile Pro Ser Val Cys Ile Gly
 245 250 255
 Ala Trp Ile Ala Thr Arg Leu Ser Leu Glu Asp Thr Gly Cys Trp Asp
 260 265 270
 Thr Asn Asp His Ser Ile Pro Trp Trp Val Ile Arg Met Pro Ile Leu
 275 280 285
 Ile Ser Ile Val Val Asn Phe Ala Leu Phe Ile Ser Ile Val Arg Ile
 290 295 300
 Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln Ser
 305 310 315 320
 Gln Tyr Lys Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe
 325 330 335
 Gly Val His Tyr Met Val Phe Ala Ala Phe Pro Ile Gly Ile Ser Ser
 340 345 350
 Thr Tyr Gln Ile Leu Phe Glu Leu Cys Val Gly Ser Phe Gln Gly Leu
 355 360 365
 Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys Glu
 370 375 380
 Leu Lys Arg Arg Trp Arg Gly Leu Cys Leu Thr Gln Pro Gly Ser Arg
 385 390 395 400
 Asp Tyr Arg Leu His Ser Trp Ser Met Ser Arg Asn Gly Ser Glu Ser
 405 410 415
 Ala Leu Gln Ile His Arg Gly Ser Arg Thr Gln Ser Phe Leu Gln Ser
 420 425 430
 Glu Thr Ser Val Ile
 435

<210> 15
 <211> 437

<212> PRT

<213> rattus norvegicus;

<400> 15

Met Arg Ala Ser Val Val Leu Thr Cys Tyr Cys Trp Leu Leu Val Arg
1 5 10 15
Val Ser Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln Glu
20 25 30
Glu Glu Thr Lys Cys Ala Glu Leu Leu Ser Ser Gln Met Glu Asn His
35 40 45
Arg Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro Ala
50 55 60
Asp Ile Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser Asn
65 70 75 80
Phe Tyr Ser Arg Pro Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp Gly
85 90 95
Trp Ser Glu Thr Phe Pro Asp Phe Ile Asp Ala Cys Gly Tyr Asn Asp
100 105 110
Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala Ile
115 120 125
Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Thr Thr Gly Ser
130 135 140
Ile Ile Ile Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr Ile
145 150 155 160
His Leu Asn Leu Phe Leu Ser Phe Met Leu Arg Ala Ile Ser Val Leu
165 170 175
Val Lys Asp Ser Val Leu Tyr Ser Ser Ser Gly Thr Leu Arg Cys His
180 185 190
Asp Gln Pro Gly Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe Phe
195 200 205
Gln Tyr Cys Ile Met Ala Asn Phe Tyr Trp Leu Leu Val Glu Gly Leu
210 215 220
Tyr Leu His Thr Leu Leu Val Ala Ile Leu Pro Pro Ser Arg Cys Phe
225 230 235 240
Leu Ala Tyr Leu Leu Ile Gly Trp Gly Ile Pro Ser Val Cys Ile Gly
245 250 255
Ala Trp Ile Ala Thr Arg Leu Ser Leu Glu Asp Thr Gly Cys Trp Asp
260 265 270
Thr Asn Asp His Ser Ile Pro Trp Trp Val Ile Arg Met Pro Ile Leu

275	280	285
Ile Ser Ile Val Val Asn Phe Ala Leu Phe Ile Ser Ile Val Arg Ile		
290	295	300
Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln Ser		
305	310	315 320
Gln Tyr Lys Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe		
325	330	335
Gly Val His Tyr Met Val Phe Ala Ala Phe Pro Ile Gly Ile Ser Ser		
340	345	350
Thr Tyr Gln Ile Leu Phe Glu Leu Cys Val Gly Ser Phe Gln Gly Leu		
355	360	365
Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Arg Glu		
370	375	380
Leu Lys Arg Arg Trp Arg Gly Leu Cys Leu Thr Gln Pro Gly Ser Arg		
385	390	395 400
Asp Tyr Arg Leu His Ser Trp Ser Met Ser Arg Asn Gly Ser Glu Ser		
405	410	415
Ala Leu Gln Ile His Arg Gly Ser Arg Thr Gln Ser Phe Leu Gln Ser		
420	425	430
Glu Thr Ser Val Ile		
435		

<210> 16
 <211> 437
 <212> PRT
 <213> rat;

<400> 16

Met Arg Ala Ser Val Val Leu Thr Cys Tyr Cys Trp Leu Leu Val Arg
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Val Ser Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln Glu
20 25 30
Glu Glu Thr Lys Cys Ala Glu Leu Leu Ser Ser Gln Met Glu Asn His
35 40 45
Arg Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro Ala
50 55 60
Asp Ile Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser Asn
65 70 75 80
Phe Tyr Ser Arg Pro Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp Gly
85 90 95

Trp Ser Glu Thr Phe Pro Asp Phe Ile Asp Ala Cys Gly Tyr Asn Asp
 100 105 110
 Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala Ile
 115 120 125
 Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Thr Thr Gly Ser
 130 135 140
 Ile Ile Ile Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr Ile
 145 150 155 160
 His Leu Asn Leu Phe Leu Ser Phe Met Leu Arg Ala Ile Ser Val Leu
 165 170 175
 Val Lys Asp Ser Val Leu Tyr Ser Ser Ser Gly Thr Leu Arg Cys His
 180 185 190
 Asp Gln Pro Gly Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe Phe
 195 200 205
 Gln Tyr Cys Ile Met Ala Asn Phe Tyr Trp Leu Leu Val Glu Gly Leu
 210 215 220
 Tyr Leu His Thr Leu Leu Val Ala Ile Leu Pro Pro Ser Arg Cys Phe
 225 230 235 240
 Leu Ala Tyr Leu Leu Ile Gly Trp Gly Ile Pro Ser Val Cys Ile Gly
 245 250 255
 Ala Trp Ile Ala Thr Arg Leu Ser Leu Glu Asp Thr Gly Cys Trp Asp
 260 265 270
 Thr Asn Asp His Ser Ile Pro Trp Trp Val Ile Arg Met Pro Ile Leu
 275 280 285
 Ile Ser Ile Val Val Asn Phe Ala Leu Phe Ile Ser Ile Val Arg Ile
 290 295 300
 Leu Leu Gln Lys Leu Thr Ser Pro Asp Val Gly Gly Asn Asp Gln Ser
 305 310 315 320
 Gln Tyr Lys Arg Leu Ala Lys Ser Thr Leu Leu Leu Ile Pro Leu Phe
 325 330 335
 Gly Val His Tyr Met Val Phe Ala Ala Phe Pro Ile Gly Ile Ser Ser
 340 345 350
 Thr Tyr Gln Ile Leu Phe Glu Leu Cys Val Gly Ser Phe Gln Gly Leu
 355 360 365
 Val Val Ala Val Leu Tyr Cys Phe Leu Asn Ser Glu Val Gln Cys Glu
 370 375 380
 Leu Lys Arg Arg Trp Arg Gly Leu Cys Leu Thr Gln Pro Gly Ser Arg
 385 390 395 400

